

NUCLEAR DIVISION NEWS



A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 1 — No. 13

OAK RIDGE, TENNESSEE

Thursday, July 30, 1970



PLAN SAVINGS BOND CAMPAIGN — A month-long Savings Bond campaign will be launched Aug. 1 at Nuclear Division facilities. W. E. Williams, general chairman, discusses plans for the program with chairmen for various organizations. From left are: Guy Tucker, General Staff; L. A. Studinger, Oak Ridge Gaseous Diffusion Plant; Williams, Edward A. Pluhar, Oak Ridge Y-12 Plant; and Hezz Stringfield, Oak Ridge National Laboratory.

MAN, ORGDP Develop New Rotor

The latest in a series of high-speed zonal centrifuge rotors with potential applications in research and industry has been developed here.

The new rotor — designated the J-1 — develops sufficient gravitational forces for industrial processing, and also has a small enough volume to permit practical use in typical university and industrial laboratories. Other rotors with similar separation capabilities have larger volumes because they were designed primarily for production purposes.

Developed by Union Carbide employees at Oak Ridge National Laboratory's Molecular Anatomy (MAN) Program and the Oak Ridge Gaseous Diffusion Plant, the J-1 was built by Electro-Nucleonics of Fairfield, N. J., under a Nuclear Division subcontract.

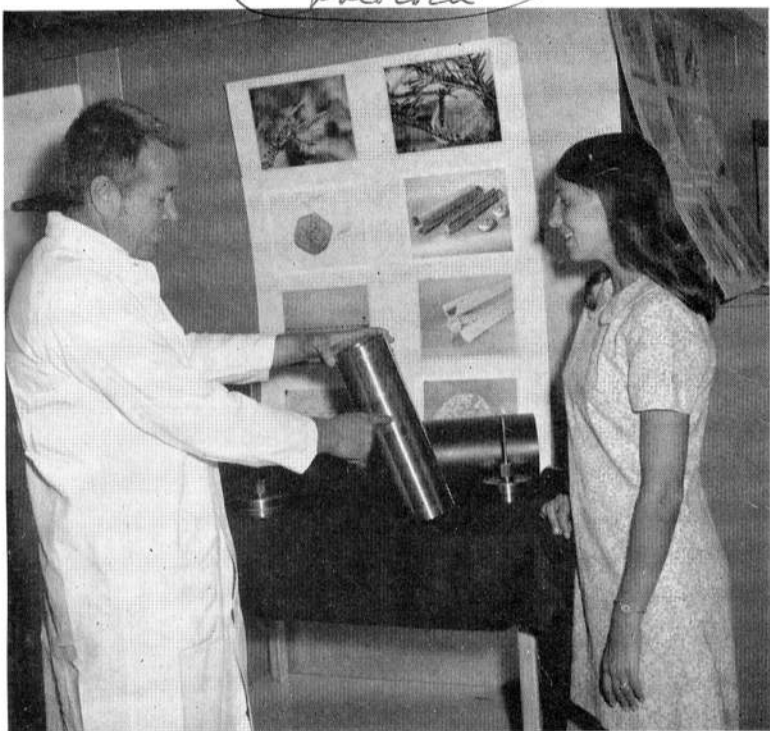
Studies by Dr. George Cline, former ORNL consultant and a biologist at the University of Ala-

bama, Birmingham, have shown the new rotor to be highly useful in purifying and separating influenza vaccine and other small particulates in sample sizes useful for research. Dr. Norman G. Anderson, MAN Program director, is coordinating the overall centrifuge development program.

The J-1 holds about 900 milliliters of sample solution, compared with about 3,000 for earlier rotors capable of similar high-purity separations.

Made of titanium, the rotor is spun by air turbines in a modified K zonal centrifuge system. In tests, it has reached speeds of 55,000 revolutions per minute — about 150,000 times gravity — and is designed to reach up to 60,000 rpm.

The J-1 and others in the series will be used in studies of a wide variety of viruses, including those associated with hepatitis.



IMPROVED ROTOR—MAN Program technician Jerry Brantley, left, shows staff secretary Nancy Hall the new J-1 rotor, which is capable of high-purity separations of biological and industrial materials in sample sizes convenient for small laboratory research.

Sewerage

Linde Process Will Be Used By New York

The City of New York will receive a \$1.5-million grant from the Federal Water Quality Administration to demonstrate a pure oxygen aeration process to upgrade existing sewage treatment plants. The city will contribute a further \$900,000 to the two and one-half year project.

The project, which is to be installed at the City's Newton Creek waste treatment plant in Brooklyn, will be the first large-scale installation of the UNOX System which was developed by the Linde Division of Union Carbide Corporation. An extensive demonstration of the system, conducted at Batavia, N. Y., shows that it should be capable of doubling the performance of an existing secondary treatment plant with almost no additional land area required. Furthermore, electric power costs for operating the plant should be significantly lowered.

In conventional secondary sewage treatment, the waste is oxidized by being mixed with air over a period of time in open aeration tanks. In the pure oxygen process, the waste is instead mixed with pure oxygen in a series of closed tanks. In the New York City test, one of the 15 20-million-gallon-per-day Newton Creek aeration tanks will be converted to operate on oxygen supplied from on-site oxygen generating plant. Startup is planned for spring, 1971. It is hoped the test will point the way toward an economical and efficient way to upgrade the whole Newtown Creek facility to remove 90 per cent of the entering BOD (Biochemical Oxygen Demand) load. Present removal is only about 40 per cent. The project will also test the effectiveness of phosphate removal by means of alum addition in conjunction with the pure oxygen process.

Take Stock in America

Payroll Savings Plan Started At Nuclear Division Facilities

A month-long U. S. Savings Bond campaign will be launched August 1 at Nuclear Division facilities in Oak Ridge. Plans for the payroll savings program have been developed by a multi-plant committee headed by W. E. Williams.

Working with Williams on the campaign are L. A. Studinger, Oak Ridge Gaseous Diffusion Plant; Edward A. Pluhar, Oak Ridge Y-12 Plant; Hezz Stringfield, Oak Ridge National Laboratory; and Guy Tucker, General Staff.

Enrollment Cards

As part of the campaign, each employee will be given the opportunity to purchase U. S. Savings Bonds. Enrollment cards will be passed out to employees at each facility. In order to participate in the payroll savings plan, employees must fill out the card, indicating the amount of money they wish to invest. Participation requires a minimum investment of 50 cents a week, or two dollars a month.

Employees also must indicate the dollar value of the bonds they wish to purchase. While bonds come in numerous denominations, the most popular have been the \$25, \$50 and \$100 bonds.

Earlier this week, Nuclear Division employees received a letter from Roger F. Hibbs, President of the Division, urging participation in the campaign. Hibbs explained that investing in savings bonds "is one of the few ways in which you can help yourself while making an important contribution to our nation."

Interest Rates Up

Interest rates on U. S. Savings Bonds have been increased six times since the first Series E Bond was sold on May 1, 1941. The current interest rate is 5 percent, if the bond is held to maturity.

The campaign committee pointed out several advantages of investing in Savings Bonds through the payroll savings plan. First, participation is automatic. That is, once an employee decides on how much he wants to invest, the bonds start stacking up auto-

Readership Survey

Would you like to help make the Nuclear Division News a better paper?

In the next issue, there will be a questionnaire on the reading habits of ND News readers. The survey is confidential; your signature is NOT required. The more who participate, the more accurate the study will be.

Be sure to fill the questionnaire in full and drop in any plant mail box. Your help will be appreciated.

matically. Second, in the event of an emergency, E Bonds can be cashed readily at the bank.

Bonds Loss-Proof

One of the big advantages of Savings Bonds is that they are "loss-proof." There is a microfilm record of every U. S. Savings Bond purchased and the U. S. Treasury will replace any bond that may be lost, stolen, or destroyed.

Several stories dealing with the many advantages of participation in the payroll savings plan are included in this issue of Nuclear Division News.

Next Bloodmobile Visit in Oak Ridge Set by Red Cross

The next visit of the American National Red Cross Bloodmobile under the Oak Ridge-Anderson County Blood Program, is scheduled for August 19 and 20 at the Oak Ridge National Guard Armory, just off Oak Ridge Turnpike. Volunteer blood donors are asked to call special number 483-0211, so that scheduling can be arranged.

"We'll need about 500 donors or more," a Red Cross spokesman said. The actual quota, to be announced in the next issue of Nuclear Division News, will be determined by hospital statistics covering county blood usage under the program up to July 1.

Donors will be scheduled between 4 and 10 p.m. on August 19, and between 11 a.m. and 5 p.m. on August 20. The Red Cross volunteer emphasized that the 4-10 p.m. schedule on the first day was arranged for the convenience of area working people, "especially for those at the Nuclear Division plants."

More than 200 volunteer workers have been recruited to keep the two-day program going smoothly. The blood program offers "blanket protection" for all Oak Ridgers and residents of Anderson County, providing blood services at greatly reduced costs.

Invest in yourself.



Take stock in America
Buy U.S. Savings Bonds & Freedom Shares

U.S. Savings Bonds Prove Excellent Tool In Providing College Funds for Children

Every parent wants his children to have the advantages of a college education. Senior citizens can remember when a luxurious four-year education could be had for under \$2,000. Today, it costs nearly that much for a single year.

College is expensive. But it's not out of reach for most families — when you buy it on the "installment plan." One of the best ways is through regular purchases of Series E Savings Bonds. Not only is it a safe, sure way to save, but you can make the interest accruals completely tax-free.

How Much To Save?

Here's how. First you need to know how much to save. You should count on at least \$6,000 for each child — to cover the four-year college costs.

For example, suppose your child is only one year old. You buy a \$25 Bond each month at a cost of \$18.75, and when the youngster reaches 18 his college fund will amount to \$5,506. He cashes the oldest Bonds for his first year's expenses, and the remainder will continue to earn more interest. If necessary, continue savings for six or eight months beyond 17 years to reach the needed amount.

But suppose your youngster is seven years old. You've got 11 years to build the college fund. Just \$37.50 a month (which buys a \$50 Bond) will accumulate \$6,202 by college age of 18.

Even if you have a 12-year-old and you haven't ever thought about college, it's not too late. In the six years remaining, you can build a fund worth \$6,026 by saving \$75 a month in \$100 Bonds.

Tax-Free Advantage

Now about that tax-free advantage mentioned earlier. A sizable amount of your savings will be accumulated interest — from \$600 to \$1,800, depending upon the length of time it took to save it. The interest is subject to Federal income taxes, and could eat into that college fund, unless you planned ahead.

Here's what you do. Have the E Bonds issued in the child's name (with yourself as beneficiary, if you like, but not as a co-owner). At the end of the first year, file a Federal income tax return in the child's name listing the increase in Bond value as income to the child. This establishes intent to report the interest annually, and no further return need be filed as long as the child's annual income is under \$600. And no tax will ever be due, because the accumulated interest will never exceed the \$900 allowable exemptions and deductions. Only outside income could result in taxes being due.

Save them
as if
your son's future
depended
on it.



Take stock in America
Buy U.S. Savings Bonds & Freedom Shares

Thus, when the Bonds are cashed to meet college costs, all accrued interest is free from Federal income tax. Be sure to keep a copy of that original tax return for the child, just in case proof of intent is ever needed. You never have to worry about State income tax returns, since no United States Savings Bonds are subject to state or local income taxes.

ODD DECORATIONS

Over the years, the Treasury has replaced thousands of mutilated U. S. Savings Bonds at no cost to the owners — Bonds that were cut up by children for Christmas tree ornaments, chewed by a dog, mutilated by mice, destroyed by washing with the laundry, burned in an incinerator, even shredded by an irate wife.

EARLY DAYS

The site for Oak Ridge and the Clinton Engineer Works was selected on September 19, 1942, and the first office for the Project was a hotel room in Knoxville.

E and H Bonds Are Great for Savings

Series E and H Savings Bonds have become more attractive savings instruments. Effective June 1, 1969, the interest rate on Series E and H Bonds has been raised to 5 percent, if held to maturity. Outstanding E and H Bonds also carry a comparable increase in rate to next maturity.

Q. What Savings Bonds are affected by the new rate?

A. All Series E and H Savings Bonds — new issues and outstanding issues.

Q. What are the characteristics of these Bonds?

A. Series E Bonds are accrual-type securities, sold at 75 percent of face value. Interest is paid by gradual increase in redemption value. E Bonds now mature in 5 years, 10 months; older E Bonds had various original maturity lengths ranging from 7 to 10 years. They are nonnegotiable and may only be redeemed by the Treasury or an authorized paying agent. (In practice, most banks and other financial institutions redeem E Bonds.) Series H Bonds are current-income securities, sold at par (face) value. Interest is paid by semiannual checks issued by the Treasury. H Bonds mature in 10 years. They are also nonnegotiable.

Q. What is the new higher interest rate?

A. Series E Bonds now return 5 percent interest, compounded semiannually, when held to maturity of 5 years, 10 months. They earn 4.01 percent for the first year; from that point on, they earn 5.20 percent if held to maturity. Series H Bonds also return 5 percent when held to a maturity of 10 years. They earn 4.29 percent the first year; thereafter 5.10 percent to maturity.

Q. What about my older E and H Bonds? Will they also pay more, or should I cash them in and buy new Bonds?

A. Older E and H Bonds also earn at the rate of 5 percent, starting with the first semiannual interest period, beginning on or after June 1, 1969. Therefore, there would be no advantage in redeeming your present holdings to buy new Bonds.

Q. Is it true that U. S. Savings Notes — "Freedom Shares"—are being discontinued?

A. Yes, Freedom Shares, which have been sold in combination with Series E Bonds, since May 1, 1967, were removed from sale on June 30, 1970.

Q. Have there been any changes in the denominations of Bonds available?

A. Yes. Series E Bonds will be sold in denominations of \$25, \$50, \$75, \$100, \$200, \$500, and \$1000 maturity value. The \$10,000 denomination will be used only for employee savings plans. Series H Bonds will be sold in denominations of \$500, \$1,000 and \$5,000. They will no longer be sold in \$10,000 denomination; however, the \$10,000 H Bond will be available for exchanges.

Q. Is there any limit on the amount of Savings Bonds one may buy?

A. Yes. The annual limit on Series E Bonds is now \$5,000, issue price, — a reduction from \$20,000, face amount; the yearly limit on Series H Bonds has also been set at \$5,000, issue price — a reduction from \$30,000 (issue price and face amount are the same for Series H Bonds).



EXHIBIT PHOTOS—Ward Bandy, left, and Bill Shipley, Y-12 photographers, recently exhibited prize-winning photographs at the Tennessee Professional Photographers Association 19th Annual Convention, held in Nashville. Bandy showed four photos, two of which earned the Court of Honor; Shipley had two accepted for display, both of which won awards.

Nuclear Lensmen Earn New Laurels

Y-12's Photographic Department was well represented at the recent Professional Photographers Association Convention in Nashville.

A total of seven photos were displayed from the Nuclear Division shop, four belonging to Ward Bandy, supervisor; and two to Bill Shipley, one to John Hawley. These pictures captured several awards and honors.

Bandy gave a talk, "Photographer at the Oak Ridge Y-12 Plant," which included many color slides of the photographer's work. Other speakers discussed industrial, commercial and portrait photographic problems.

Of Bandy's four photos accepted for exhibit, three received awards. Two of the pictures merited the Court of Honor award, among the top 10 percent of all prints entered. These earned Bandy a plaque.



ALSO SHOWS—John Hawley, Y-12 photographer, recently showed one of his pictures at the TPPA Convention. Hawley produces many of the photographs used in the Nuclear Division News.

Near Accident

Wiley Barber, painter in the Buildings and Grounds Department, can vouch for the fact that a hand mirror left exposed in a car is a potential fire hazard. The Barbers recently returned after church to their home in Coalfield. Their car was parked in the sun when their granddaughter, Jamie Dee Barber, 5, came in the house and reported smoke coming from the car.

Barber discovered that one of his grandchildren had left a hand mirror, about five inches in diameter, lying on the rear seat of his car. The direct rays of the sun reflecting from the mirror onto the interior upholstery of the roof scorched the material. Thanks to a very alert granddaughter, no great harm was done.

Here's How Savings Bonds Grow

WEEKLY SAVINGS

Save Each Week	1 yr.	3 yrs.	5 yrs. 10 mos.	15 yrs. 10 mos.
\$ 1.25	\$ 66	\$ 205	\$ 429	\$ 1,539
2.50	131	412	861	3,088
3.75	197	618	1,295	4,638
5.00	263	825	1,725	6,185
6.25	328	1,031	2,160	7,737
7.50	395	1,237	2,592	9,285
12.50	657	2,063	4,321	15,483
18.75	987	3,095	6,486	23,234

MONTHLY SAVINGS

Save Each Month	1 yr.	3 yrs.	5 yrs. 10 mos.	15 yrs. 10 mos.
\$ 3.75	\$ 45	\$ 142	\$ 296	\$ 1,060
6.25	76	237	494	1,771
7.50	91	284	595	2,128
12.50	151	474	993	3,548
18.75	228	714	1,493	5,342
25.00	303	951	1,986	7,113
37.50	455	1,428	2,985	10,684
56.25	683	2,142	4,478	16,025
75.00	910	2,856	5,970	21,367

NEWS

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UNION CARBIDE
CORPORATION



NUCLEAR DIVISION

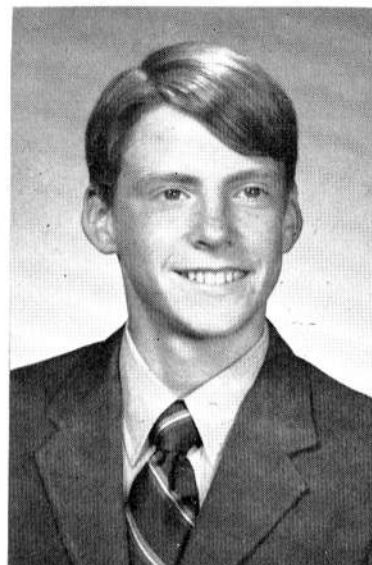
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Off to Brazil!



Scot Tillery

It's winter in the Southern Hemisphere, so Scot Tillery, son of the Howard G. Tillerys, will be attending school in Brazil this summer.

Scot is the recipient of the American Field Service International Scholarship, where a student goes to another country and lives in the home of some student there . . . while the AFS brings students from that land to this country for similar experiences.

He will reside with the Ubaldo R. Ribeiro family in Guararapes, Brazil. There are three sons and three daughters in this Brazilian family. The head of the household is a banker there, and one member of the family describes them as a "happy, noisy, curious, united and informal" family.

Scot will be a senior this fall at Central High School. At Central he has been a member of the AFS Club, Beta Club, Octagon (service) Club, Latin Club, Curtain Club, is an Honor Thespians in the National Thespians Society, is in the Mixed Chorus and the Senior Choral. He sang the role of "Scarecrow" in the production of the "Wizard of Oz" at the Civic Auditorium in May of this year.

Swimming, acting and music occupy most of the busy teenager's spare time.

Scot plans to attend the University of Tennessee when he graduates to study pre-law.

His father is in Y-12's Mechanical Design Engineering.

AEC Classification Topic For Woodbridge Speech

Y-12's Plant Classification Officer, Donald B. Woodbridge addressed the National Classification Management Society Seminar meeting July 14-16 in Los Angeles.

His topic was "Some Thoughts on Classification in the AEC."

Woodbridge is a former president and board chairman of the 200-member society, which was founded in 1964. Its membership is composed of managers and administrators concerned with classification management problems.

Moon Rock

Y-12ers Spearhead Karns Community Fair Next Weekend

Karns community residents will hold their annual community fair Friday, August 7, and Saturday, August 8. The scene will be on the grounds of Karns Elementary and Karns High School. Leonard L. Bennett, ORNL's Reactor Division, and Ben Etheredge, Y-12 Fabrication, are chairmen of the big event. Many other Y-12ers living in the community are taking an active part in the fair.

One of the principal events will be the exhibition of a nine ounce moon rock, the largest sample yet to be displayed on public exhibition. This display will be from 1 to 5 p.m. Saturday, August 8.

Larry Hawk, Special Projects, will exhibit lunar sampling equipment manufactured here in Y-12. Joe Northcutt, ORNL, will show the nine ounce moon rock and explain the process for gamma ray spectrographic analysis being conducted by Dr. G. Davis O'Kelly, also of ORNL.

Approximately 1,000 entries are expected in the traditional competitive exhibition of farm products, vegetables, canning, honey, needlecraft, floral arrangements, art and handicraft.

Multiple Exhibits

The non-competitive exhibits will feature: approximately 60 paintings selected from artists in East Tennessee, antiques representative of home furnishings and equipment of past generations, members of the Smoky Mountain Gun Club will display their most coveted antique firearms, the National Railway Historical Society will exhibit their program of railway development from 1860 to present.

The midway will have approximately 15 games. These include pitching baseball and bottles, tossing a softball in a basket, basketball goal shooting, greased pole climbing, dunk-the-clown, dart throwing, and other games for young and old.

The cafeteria will supply food and drink including barbeque pork and beef, hamburgers, hot dogs, cakes, pies, ice cream, watermelon and other delicacies.

Merchants will exhibit their wares; antique dealers will display their finest articles, separate from the antique exhibit; and civic organizations will have display booths and exhibits. An old-time country store will operate selling canned goods, vegetables, jewelry, clothing, and other items.

The Fairest of the Fair pageant will be held at the High School Friday night. It begins at 7:30 p.m. Hours of the exhibits will be from 10 a.m. until 7:30 p.m. Saturday, August 8. The moon rock will be on display from 1 to 5 p.m. Saturday only.

An old-fashioned square dance and ice cream supper will be held Saturday from 9 until 12 p.m.

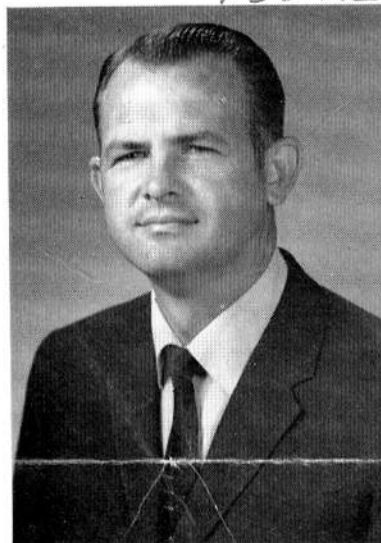
Proceeds from the Fair will be used in the development of a youth center in the community.

SPRAY-ON INSULATION

Chemical progress has made possible complete insulation of houses by spraying a chemical product, urethane foam, directly over outside bricks.



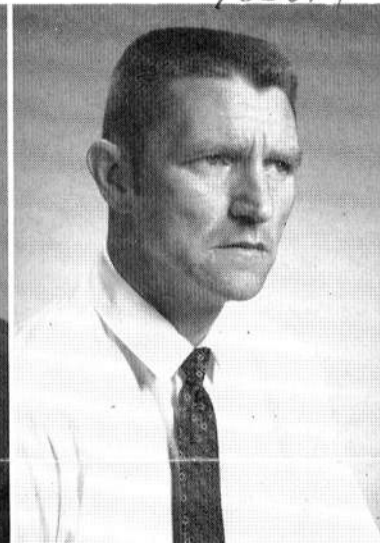
William R. Hicks



Ben M. Rutherford



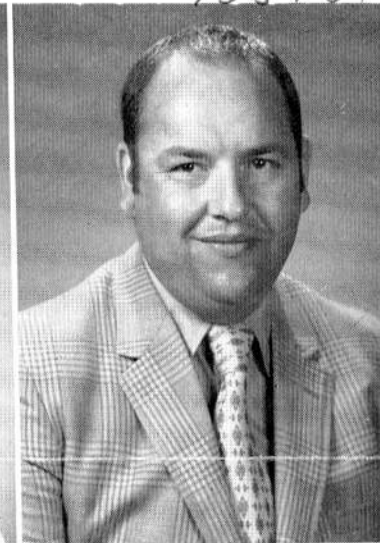
Benny S. Houser



Gondle D. Weaver



Emery T. Rose



Wallace L. White

Y-12 Credit Union Mails Statements to Members

Current account standings have been mailed to all members, according to the Supervisory Committee of the Y-12 Credit Union.

If there are questions concerning the statement and/or account verification notices, they should be directed to the Supervisory Committee, P. O. Box 3112, Oak Ridge, Tennessee 37830.

All other business, including payments on loans and deposits on share accounts, must be handled directly with the Y-12 Employees Federal Credit Union, Lafayette Drive, Oak Ridge. DO NOT SEND MONEY, CHECKS, MONEY ORDERS TO THE SUPERVISORY COMMITTEE! This only results in delay in your deposit on loan payments being posted. Normally, the supervisory committee's mail box is emptied only once a week.

More than 41 percent of all matured Series E Savings Bonds are still outstanding, in the hands of tens of millions of owners.

SAFETY SCOREBOARD

The Y-12 Plant Has
Operated
208 Days Or
6,339,000 Man-Hours
(Unofficial Estimate)
Through July 26
Without A Disabling Injury
SAFETY AT HOME,
AT WORK, AT PLAY

Hicks, Houser, Rose, Rutherford, Weaver And White Promoted in Physical Testing

The Technical Division has promoted six men in Physical Testing to Laboratory Supervisors: William R. Hicks, Benny S. Houser, Emery T. Rose, Ben M. Rutherford, Gondle D. Weaver, and Wallace L. White.

William R. Hicks

A native of Niota, William R. Hicks came to Y-12 August 14, 1953. He is a veteran of the U. S. Army, and worked at the Judith Hosiery and Crescent Hosiery Mills, Niota, before coming here. He also was a patrolman for the Department of Safety of the State of Tennessee from 1951 until 1953.

Mrs. Hicks is the former Mildred DeWitt. They live at Route 5, Lenoir City.

Benny S. Houser

Benny S. Houser was born in Neubert Springs, Knox County, and attended Knoxville schools. He attended Tennessee Wesleyan College and for the past three years has attended The University of Tennessee.

He worked at Loveman's, Oak Ridge, and in the County Court Clerk's office before coming to Y-12 October 6, 1954.

Mrs. Houser is the former Jean Davis. They have two children, Chris and Traci and live at Route 2, Clinton.

Emery T. Rose

Born in Compton, Ky., Emery T. Rose came to Y-12 December 1, 1967. He hired in with Union Carbide, however, April 4, 1961 in Lawrenceburg with the Carbon Products Division. He worked briefly with that division in Fostoria, Ohio, also. He attended

Bowling Green State University and Eastern Kentucky State University.

Rose is married to the former Linda Everett, and they have three children, Lynn, David and Doug. They live at 113 North Seneca Road, Oak Ridge.

Ben M. Rutherford

Born in Andersonville, Ben M. Rutherford came to Y-12 December 6, 1954. He served in the Tennessee National Guard from 1953 until 1961, and was employed with Walker Chevrolet, Clinton, before coming here.

Mrs. Rutherford is the former Peggy Human and they have four children, Myra, Ben, John and Russell. They live at Route 1, Clinton.

Gondle D. Weaver

A native of Clinton, Gondle D. Weaver is a veteran of the U. S. Army, serving from 1953 until 1955. He was employed with Walker Chevrolet, Clinton, four years before coming here.

He came to Y-12 August 8, 1960. Weaver lives at Route 1, Clinton.

Wallace L. White

A native of Lake City, Wallace L. White came here January 20, 1930. He served two years in the U. S. Army, and attended The University of Tennessee. He was employed with the H. B. Watts Furniture Company, Lake City, and the U. S. Post Office prior to his coming to Y-12.

Married to the former Carolyn Hunt, White lives at 3111 Sandalwood Road, Knoxville. Their children are De Anna and Dana.



ADMIRING CERTIFICATE—Jeri Kobisk recently completed a three-year home correspondence study course with the Famous Artist School. Looking over Jeri's shoulder at left is M. A. Broders, supervisor of the Technical Information Service Department. Andrew Denny, supervisor of the Development Reports Section is at the right.

Jeri Kobisk Awarded Diploma in Art For Three-Year Correspondence Course

Jeri Kobisk, Technical Information Services illustrator, has graduated from the Famous Artists School, Westport, Conn.

Jeri specialized in commercial art and illustration during the three-year course with the home study school. She undertook the

course under the Carbide Educational Assistance program.

A native of Chicago and a graduate of Northwestern University with a B.S. in education, Jeri joined Y-12 in 1953. After several years of clerical jobs throughout the plant, she discovered her talent in a variety of drafting tasks. Her supervisors utilized her abilities when regular draftsmen were unavailable. Eventually, drafting became a full-time job.

Off the job, Jeri bowls in the Mixed Doubles League (was captain of the championship team last year) and serves as secretary of the Smoky Mountain Gun Collectors Association. She recently did the layout and illustration for that association's catalogue. She belongs to the Oak Ridge Sportsman's Association and the National Muzzle Loading Rifle Association. Jeri lives at 454 West Outer Drive, Oak Ridge, with her son Robert.

Five Y-12ers to Retire With 89 Years Service



Dillehay King



Narcrosse Sorrell



Whitmore

Five Y-12ers retire today, marking more than 89 years service with Union Carbide Corporation.

They are: Fred J. Dillehay, Process Maintenance; James F. King, Area Five Maintenance; Thomas A. Narcrosse, Accounting and Budgets; Wesley E. Sorrell, Assembly Operations; and Harold B. Whitmore.

Lloyd Wyatt Has Leading Position in Table Tennis

Lloyd Wyatt leads the Summer Table Tennis league after five weeks of play. He recently defeated Gordon Brewer for three games; Jerry Keyes for three also.

Herb Mook won two from Roy Huddleston recently; two from Jerry Goldstein. He holds second place, three points behind Wyatt.

Bolt-Pelfrey Are Winners In Southwest Golf Race

Final standings for Southwest Point Golf League, through the first half:

Team	W	L
Bolt-Pelfrey	34	8
Jones-Morgan	23	14
Henderson-Stanton	25	17
Stark-Wilkey	24	18
Briscoe-Williams	18	24
Boyd-Bush	13	29
Mee-Wright	12	30
Plemons-Roberts	12	30



A host of Y-12ers mark important dates with Union Carbide Corporation early in August. Congratulations.

25 YEARS

Cecil M. Miller, Salvage Department, August 1.

Frank Darby, Electrical and Electronics, August 2.

William R. Blackwell, Dispatching, August 3.

Rudolph Paluzelle, Materials Engineering Development, August 5.

Clarence G. McQueen, Buildings, Grounds and Maintenance Shops, August 6.

Eddie Johnson, Garage, August 6.

Bertha E. Crowder, SS Material Control, August 7.

George W. Graham, Process Maintenance, August 7.

Everett C. Walker, Buildings, Grounds and Maintenance Shops, August 8.

Ruth H. Gallardo, ORNL Chemical Services, August 10.

Owen C. Beatty, Guard Department, August 10.

Richard M. Mustin, Beta Two Chemistry, August 12.

20 YEARS

Ralph R. Hartman, Research Services, August 2.

Hoyle E. Dake, G-3 Processing, August 7.

Lether L. Hamlin, Area Five Maintenance, August 7.

Arville J. Crawford, Assembly Operations, August 10.

Frances B. Donahue, Superintendents Division, August 11.

15 YEARS

Grady G. Norton, General Metal Fabrication Shop, August 1.

Joseph W. McNeal, Process Maintenance, August 4.

Murrell R. Whaley, Process Maintenance, August 4.

Fred N. McLain, General Machine Shop, August 6.

Olen K. Melton, General Weld Shop, August 6.

John O. Brown, Jr., Buildings, Grounds and Maintenance Shops, August 10.

Janice G. Midkiff, Superintendents Division, August 10.

10 YEARS

Robert C. Crowe, Production Radiation Testing, August 8.

Goldie D. Weaver, Production Radiation Testing, August 8.

Margaret C. Cook, General Plant Tooling Coordination, August 8.

Ben H. Miller, Materials and Services Administration, August 9.



Ride wanted from Claxton to North Portal, straight day. S. L. Franks, plant phone 3-7141, home phone Claxton 945-2250.

Ride wanted from Lake City to West Portal, straight day. Karen Watson, plant phone 3-7430, home phone Lake City 5533.

Ride wanted from Morelia Avenue, North Knoxville, to Biology Portal, straight day. Richard Neal, plant phone 3-7237, home phone Knoxville 522-7910.

Will join car pool from Vista Drive, Clinton, to West or Pine Ridge Portals, straight day. Mary Hall, plant phone 3-7102, home phone Clinton 457-1555.



Mrs. Stephen DeLapp

Bolt Daughter Tops Rockwood's Seniors



Missie Bolt

Missie Bolt, daughter of Clarence R. Bolt, Area Five Maintenance, recently graduated as valedictorian at Rockwood High School.

Missie, voted "Most Likely to Succeed" by her classmates, is a member of the Future Teachers of America, the Booster Club, Math Club, in the senior play cast, president of the Beta Club, and editor of her yearbook staff.

Also a Lions Club Scholastic Award winner and Girls' State delegate, Missie will attend David Lipscomb College in Nashville this fall on an academic scholarship.

Green - McDonald Take Melton Hill's Top-Spot

The Green-McDonald pair assumed the lead among Melton Hill golfers last week, after smashing the Butturini-McElroy team for the full count.

Tom Reed turned in what must be the lowest card of the year... showing a 31 scratch score on the nine holes!

League standings follow:

Team	W	L
Green-McDonald	37	17
Wetzel-Hatmaker	35	19
Alvey-Pryson	35	19
Rogers-Verner	34	20
Emery-Baker	33	21
Grubb-Wright	29	25
George-Strike	26	26
W. Sherrod-Wyrick	27	27
Reed-J. Sherrod	27	27
Crowder-Buxton	26	28
Butturini-McElroy	21	33
Nixdorf-Holdaway	20	34
Waldrop-Babb	17	37
D. Thomason-R. Thomason	9	45



DeLAPP-STOOKSBURY

Miss Diane Stooksbury and Stephen DeLapp pledged nuptial vows at 7:30, Saturday, June 13, at the First Baptist Church, Andersonville. The Reverend M. K. Cobble officiated at the evening rites.

The bride is the daughter of Mr. and Mrs. Conley B. Stooksbury, Norris; and the bridegroom is the son of Mr. and Mrs. Jay Will DeLapp, Burris Rd., Knoxville. The bride's father is in Y-12's Beta Two Forming Shop.

Mrs. Stooksbury fashioned and made her daughter's gown of silk organza and peau de soie, trimmed with Alencon lace. The veil of illusion was held by a headpiece of white roses. She carried a nosegay of pink and white rosebuds.

Mrs. John D. Robbins, Jr., Oak Ridge, served as her sister's matron of honor. The bridesmaids were Seila Stooksbury, sister of the bride, Donna DeLapp, sister of the groom; Dana Wallace, Memphis; Mrs. James Stooksbury, Lenoir, N. C.; and Mrs. James Tidwell, Oak Ridge.

Mr. DeLapp served as his son's best man. Ushers were Terry DeLapp, brother of the groom; Dave Miller, Atlanta; Mike McNabb and Bill Briscoe, both of Oak Ridge; and Glen Nichols, Knoxville.

After the reception at the church, the newly-weds left for a southern trip. They will reside in Atlanta.

Loupe-Phillips Continue Slim South Hills Lead

Bud Leete led South Hills golfers both weeks in individual scoring, firing a 35 scratch score recently and a 39. He pairs with Dale Phillips currently to lead the Oak Ridge club.

White-Gallman, in second place tied with Parrott and Parker, turned in high individual scores recently with a 76 handicap tally.

League standings follow:

Team	W	L
Loupe-Phillips	43	11
White-Gallman	37	17
Parrott-Parker	37	17
Size-Size	34	20
Oakwood-Leete	29	25
Jones-Cogswell	27	27
Collins-Sewell	24	30
Josost-Pappas	23	31
Ellis-Riding	22	32
Cantrell-Gresham	22	32
Cabe-Cabe	16	38
Huber-Parker	10	44

Jim George Has Second Ace on Blount Greens!

A hole-in-one comes perhaps once in a lifetime to a golfer. To Jim George, Critical Path and Regular Production Scheduling, it recently came for the second time!

Jim aced hole number six at Wallace Hills recently over near Maryville. (His first bull's-eye came at Lambert Acres, also in Blount County).

Firing on the 120-yard, par three hole, Jim had along as witnesses fellow Y-12ers Joe Sherrod, Dick Nixdorf and Tom Reed.

Al Groppe, Well Known Maintenance Retiree, Dies

Al Groppe, well-known Maintenance Department superintendent, died July 8, after a long illness.

Groppe retired from Y-12 April 30, 1962. He is survived by his wife, a daughter, and a Y-12 son, Wayne.

THE CARBIDE COURIER

Thursday, July 30, 1970

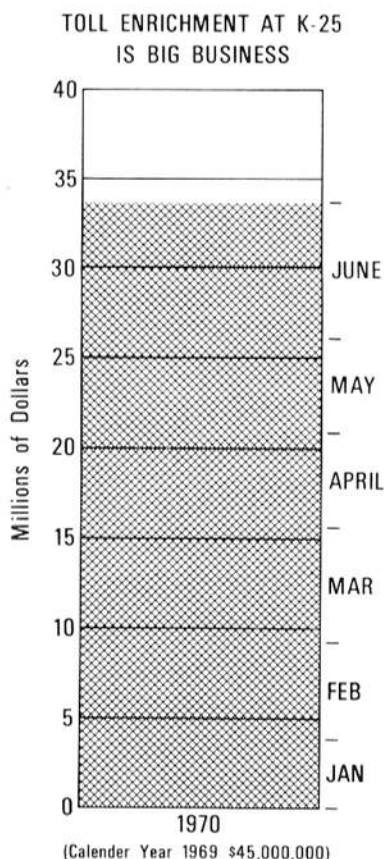
Page 3



BOND DIVISIONAL CHAIRMEN—K-25 Savings Bond Divisional chairmen include the above men, from left, G. B. Brooks, Finance and Materials; W. K. Simon, Operations; W. J. Grunst, Engineering; L. A. Studinger, K-25 Drive Chairman; E. B. Harris, Technical Divisions (three); R. J. Betts, Industrial Relations; and F. H. Anderson, Shift Operations and Security.



PROMOTE BOND DRIVE—General Staff representatives who will be chairmen for the U. S. Savings Bond drive in the Nuclear Division during August are, from left, H. R. Gregg, Computing Technology Center; R. B. Bible, General Accounting; J. O. Alexander, Purchasing; G. V. Tucker, chairman, General Accounting; J. L. Smith, Legal; J. M. Haffey, Jr., Public Relations; and W. E. Schimmel, Auditing.



Larry Wheeler Gets New Post

Larry E. Wheeler has recently been promoted in the Uranium Control Department of the Operations Division, and has been appointed as the SS Accountability Representative for the Oak Ridge Gaseous Diffusion Plant. He is responsible for accounting for all uranium materials received, stored, and in process at our plant.

Wheeler began his career with the Company in December, 1936, as cashier in the Paymaster's Office, and transferred to the Operations Division in 1967. He was born in West Virginia, and was graduated from Concord College in Athens, W. Va., with a bachelor's degree in political science. He is continuing his education by taking advantage of the Educational Assistance Plan to attend evening courses offered by The University of Tennessee in Oak Ridge leading toward a master's degree in industrial management.

Wheeler is married to the former Nancy Leah Branam, a na-



Larry E. Wheeler

tive of Harriman. Mrs. Wheeler, a graduate of Tennessee Technological University in Cookeville, is employed by the Tennessee State Welfare Department, Harriman. The Wheelers live on a small farm near Harriman, where they raise horses and beef cattle. They both enjoy fishing and water skiing.

Cary, Kessing, Lewis, Redden Retire On July 31 at Gaseous Diffusion Plant

Four employees will join the growing ranks of retirees at the end of this month. E. E. Cary, A. J. Kessing, and Jimmie Lee Lewis reach normal retirement age and Roy C. Redden has elected early retirement.

E. E. Cary

Elva Cary is supervisor of refrigeration and air conditioning services in the Fabrication and Maintenance Division. He has been employed here since September, 1944. Before coming with us he worked with the J. A. Jones Construction Company.

Cary was born in Inman, Va. He attended public schools in Wise County, Va., and the Cass Technical School in Detroit, Mich. Mrs. Cary is the former Ellen Claire Porterfield and they have two children: John Hale Cary, a partner in the law firm of Hayes, Gilreath and Cary in Knoxville; and Martha Lane Cary, enrolled in Cumberland College at Williamsburg, Ky.

Cary's outside interests include traveling, attending sports events, fishing and gardening. The Carys expect to do some extensive traveling the first few months of retirement. They live on Route 3, Clinton.

A. J. Kessing

A. J. Kessing was first employed by Carbide and Carbon Chemicals Company at the Whiting Plant in Hammond, Ind. in September, 1934. He came to K-25 in March, 1944. His job here has been as central cashier in the General Accounting and Finance Division.

Kessing was born in Chicago, Ill. He attended public schools in Hammond, and the University of Cincinnati, Ohio. Mrs. Kessing is the former Josephine E. Otto and there are three children: Barbara, who resides in Alcoa, is married and has two children; Roger, who is in the U. S. Army Signal Corps, stationed in Honolulu; and Ronald, who is a sophomore at Tennessee Technological University in Cookeville.

Kessing has been active in sports for many years. He helped lay out, build, and served as the first president of the Oak Ridge Golf and Country Club. He also directed the first state bowling tournament in Oak Ridge.

His future plans include "Just play it by ear — take it easy for a while, then take things as they come." His outside interests include golf, bowling, and travel.

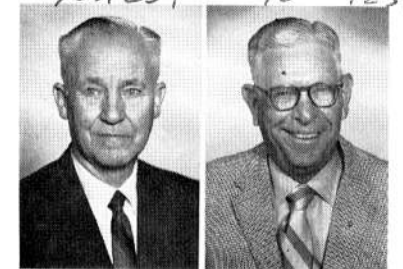
The Kessings live at 822 Nelson Drive, Kingston.

J. L. Lewis

Lewis has been employed in the Janitors Department since October, 1951. Before that he worked for Management Services Inc. A native of Opelika, Ala., he attended the Opelika city schools.

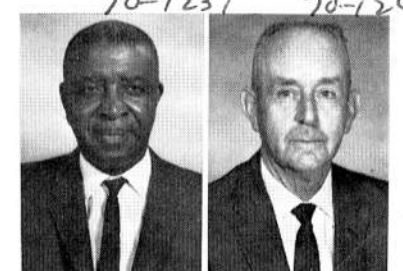
Mrs. Lewis is the former Willie Mae Jones. They have two children; Lizibeth Phipps and Jimmie, Jr., both working in the Biology Division of ORNL.

Lewis has worked three years in the United Fund Drive in the plant and has served as job steward in his district for six years. His plans include a lot more fishing and hunting. He is looking



Cary

Kessing



Lewis

Redden

forward to seeing a number of friends in his home town. Lewis said, "I have enjoyed working for Carbide and have made many friends that I will certainly miss."

The Lewises live at 293 South Benedict Avenue, Oak Ridge.

R. C. Redden

Roy Redden has been employed in the Utilities Operations Department of the Operations Division. Before coming with us he served more than 11 years in the U. S. Army. He received his discharge from the Army on June 22, 1945. He came to Oak Ridge on July 4 and started to work for Carbide the next day, thus completing 25 years' service this month.

Redden was born in Wingo, Ky., and attended public schools in Cuba, Ky. He is married to the former Mattie Lou Noe and they have a son, Wayburn Edward, who works for the J & J Machine & Tool, Inc., Knoxville.

Redden plans to raise a few cattle on his farm on Route 5, Powell, and to do some bird hunting and attend field trials. He says, "I have enjoyed working at ORGDP and have many friends here. I enjoyed playing baseball for five or six years here at Carbide."

TIPS FOR BOND OWNERS

It pays to keep your Savings Bonds in a safe place — with a record of all the Bonds you own by serial number, denomination, date, and name of co-owner or beneficiary kept in a separate, safe location. But if you should lose your Bonds — or if they are stolen or damaged — write to the Bureau of the Public Debt, Division of Loans and Currency, 536 S. Clark St., Chicago, Ill. 60605. The Treasury will replace them free.

THE CARBIDE COURIER

Published Biweekly

Editor H. J. Mayberry
K-1002 Building, Tel. 3-3097

These Employees Reach 25 Years Service This Month



James Hendrix Gets Award For Heroism in Vietnam Action

An outstanding act of heroism recently resulted in the award of the Soldier's Medal to Army Staff Sergeant James Hendrix, son of Mr. and Mrs. Noah Hendrix, 107 Jellico Lane. Mr. Hendrix is a maintenance mechanic in the Cascade Maintenance Department. Sergeant Hendrix worked here as a trainee a little over two years before he entered the Army.

He received the medal for risking his life to save others while on duty in Vietnam. The medal is the nation's highest award for heroism in a noncombat situation.

Sergeant Hendrix is assigned as a section sergeant with headquarters company, 1st battalion, 327th infantry, 1st brigade of the 101st airborne division.

The citation reads: "While passing a helicopter landing pad, Sergeant Hendrix saw a CH-47 helicopter crash during take off. Both door gunners were burned by the resulting fire as Sergeant Hendrix pulled them free of the aircraft. He immediately took charge of the situation and administered first aid. He organized a stretcher team and carried the most seriously injured man to a medical evacuation helicopter.

"He accompanied the helicopter to the hospital — his quick and courageous actions were responsible for the injured man's immediate treatment. Sergeant Hendrix's personal bravery and devotion to



S. Sgt. James Hendrix



NEWLY WED — Miss Sharon Kay Warrick and Mr. Steven Wayne Cardin were married at the Madisonville Presbyterian Church, Sunday, June 7. They are presently residing at 3700 Sutherland Ave., Knoxville. A March graduate of UT, Sharon is working as a secretary in Industrial Relations here at K-25.

duty were in keeping with the highest traditions of the military service and reflect great credit upon himself, his unit, and the United States Army."

Sergeant Hendrix also holds the Bronze Star, Army Commendation Medal, and Purple Heart.

His wife, Marie, lives at 4414 Desert View, San Antonio, Tex.

20 Years' Service

G. L. Kinser7-18-50

10 Years' Service

J. C. Gardner7- 1-60
M. Masters7-11-60
J. W. McKeever7-11-60
L. J. Willien, III7-11-60
A. M. Galyon, Jr.7-23-60
J. H. Salts7-25-60
S. G. Goad7-25-60

Age 56
K-25er Graduates From Knox School

"I believe that this was one of the happiest moments of my life," said Fletcher Madison as he told of his graduation this June from high school in Knoxville at the age of 56. Madison had been attending school five nights a week, from 6 to 11:30 p.m. for the last 20 months to achieve this goal.

Madison is a brickmason-cement finisher in the Buildings and Grounds Department of the Fabrication and Maintenance Division. He has been employed here since January, 1951, coming from the J. A. Jones Construction Company.

Madison was born in Sumpter County, Alabama. Mrs. Madison is the former Nonie Backton of Selma, Ala. They have a son, Milton, who works for Dempster Brothers in Knoxville. The Madisons live at 2020 Brice, Knoxville. In addition to his extensive



Fletcher Madison

school schedule, Madison found time to serve as a deacon in the Tabernacle Baptist Church. He is also a member of the Board of Directors of Tabernacle Apartments, a \$1,800,000 federally financed apartment complex of 96 units.

Lab Notes



Wanda Lassiter

Wanda Lassiter, daughter of G. E. Lassiter, Materials Development Department, a 1970 graduate of Oliver Springs High School, has been accepted for training as a dental hygienist at East Tennessee State University starting with the fall quarter 1970. She is presently working as a dental assistant in Oak Ridge.

Olin Howard, of the Isotopic Analysis Department, will present a paper at the Fourteenth Con-


'Mod' Film Features New Nuclear Careers

The Atomic Energy Commission's Film Library in Oak Ridge has added a popular-level movie designed to interest junior and senior high school students in nuclear careers.

The film, "Go Fission," was produced for the Consolidated Edison Company and the Pacific Gas and Electric Company with the assistance of the AEC. Much of the footage for the 14-minute movie was shot at AEC and contractor facilities in Oak Ridge.

The kaleidoscopic presentation, in a "mod" style with a jazz musical score, shows young people at work in a wide range of occupations in nuclear science, research and industry. The fast-paced visuals are, in effect, answers to questions young peoples' voices ask about nuclear careers. The movie may be borrowed free of charge from the AEC's Film Library.

ference on Analytical Chemistry in Nuclear Technology at Gatlinburg, October 13-15. Howard's paper, entitled "Determination of Metallic-Element Impurities in Uranium Hexafluoride by Mass Spectrography," describes the progress of a development project of real importance to the analysis of uranium hexafluoride involved in toll enrichment programs.


J. E. WISE

15 Years' Service

J. Z. Soard7-15-55
F. T. Denton7-18-55
V. C. Jennings7-20-55
J. O. Bishop, Jr.7-25-55

Cost Reductions Result in Great Savings by Unit

More than \$95,000 have been saved in operating expenses by Fabrication and Maintenance employees since the start of the Division's cost reduction program in January. This program includes a careful review of drawings, bills of materials, use of proper equipment and the use of new and innovative techniques to produce high quality work at reduced cost.

Through the end of June, a total of 89 cost reduction accomplishments was reported. While most of these reports pertain to one-time savings on a particular job, a substantial number of the reports indicate that savings will accrue over the balance of this year and be carried over to future years' operations.

The largest cost reduction is calculated to save \$11,980 over a two-year period.

CHEMICAL PARKING METER

A Chicago inventor believes his chemical timekeeper can replace parking meters and at far less expense. The timer, a strip of special filter paper, would be placed on the windshield by the motorist when he parks. As air penetrates the timer, its color slowly changes. When all the color disappears, the parking time is up.

SAFETY SCOREBOARD

OUR PLANT
Has Operated
597,000 Safe Hours
Through July 24

Since last disabling injury on June 11

Backyard Poisons

By T. A. LINCOLN, M.D.

If one seeks a poison, he need not go to the drug store or look in his garage. He can probably find a poison growing in his own back yard or in a pot inside his house. If not there, he can take a short hike into the woods and find one easily.

Children are most frequently poisoned, but adults also occasionally become severely ill after an eating experiment with an unknown seed or leaf. Young people constantly searching for a new "kick," may try to brew a tea or smoke some leaves of plants that are poisonous. Some husbands who fancy themselves as super salad-makers may be tempted to try a few leaves of an attractive plant growing near the back of the lot.



Dr. Lincoln

Although a book on poisonous plants is obviously of great value to poison control centers, it is a little disturbing to read about all the poisons available nearby. If one wanted to "do in" his neighbor, he could get many ideas from **Human Poisoning from Native and Cultivated Plants**, by James W. Hardin and Jay M. Arena, M.D., published by Duke University Press. Hardin is a botanist at Duke and Arena is President of the American Association of Poison Control Centers and professor of pediatrics and director of the poison control unit at the Duke Medical Center in Durham, N. C.

The oleander is an example of a dangerous shrub common in the deep south. One leaf is enough to kill an adult. An oleander branch used as a skewer to roast meat over an open fire could transfer a fatal dose to the meat. Presumably, roasting marshmallows with an oleander twig could be extremely dangerous.

The water hemlock is an attractive 3- to 7-foot tall plant with narrow, pale, blue-green leaves and carrot-like roots. It is found along stream banks and roadside ditches throughout the eastern United States. A single mouthful of the plant's roots can kill a man in 15 minutes. The roots have been mistaken for wild parsnips or wild artichokes. Children have been poisoned by making peashooters and whistles from the hollow stems.

The Virginia creeper, holly, black cherry, mountain laurel and rhododendron are all poisonous. The berries, leaves or flowers may cause serious difficulty. In a recent article in **Emergency Medicine**, Dr. Arena reports that American Indians used mountain laurel to commit suicide. If enough is eaten, almost any part of the plant will cause convulsions, progressive paralysis and death.

Poisonous Leaves

When crushed, the leaves of the common tomato plant have a pungent and spicy aroma almost like mint. However, they are poisonous. Children who have used them to make tea have developed severe reactions. The leaf blades of rhubarb will produce nausea, vomiting and internal bleeding. All parts of the potato plant except the potato itself are toxic. Potato sprouts have caused severe poisoning in children. Many members of the mustard family can cause vomiting and diarrhea if the wrong parts are eaten. The roots of the cabbage, kale, cauliflower and mustard can cause fairly severe symptoms.

A word about the pokeweed for hikers and connoisseurs of local color. Rural "natives" of East Tennessee quite often cook pokeweed greens. They are apparently edible if thoroughly cooked. However, if some of the roots get put into the pot or if the leaves are not cooked in two waters, serious poisoning can occur. Pokeweed pie is a "delicacy" but infants can be fatally poisoned by eating a few raw berries.

Common house plants which are poisonous include dieffenbachia, English ivy, hyacinth and amaryllis. The dieffenbachia leaves contain needle-like crystals of calcium oxalate and the enzyme asparagine, which cause severe swelling of the mouth and tongue as well as nausea and vomiting.

Medicinal Plants

Plants are a source of important medicines. Sucking the flowers or eating the leaves of the foxglove plant may cause severe digitalis poisoning. Extremely small doses of this drug

Slowpitch Softball Teams to Compete For League Laurels

The race for laurels in the Softball League tightened down to the near-finish line last week, as four teams must play a play-off to determine the champs. The Y-12 Eagles currently lead the pack with 11 wins, one loss.

Action began July 13 with the Colts kicking the Knockers around 16 to 2. Jim Shoemaker homered twice for the winning Colts; Jim Hensley once for the losers.

Snakes Edge By Braves

The Snakes put the Braves down, barely, 13 to 12... even though they were out-hit. Calvin Angel homered for the winning cause; J. D. Kelly and Hal Smith kayoed for the losers.

The Eagles put their claws into the Raiders 14 to 2, as Hugh Richards, Larry McDonald and Fred Wetzal all poled long ones. On the losing side, it was Bill Thompson and J. Mills.

The Gashouse Gang began action July 14 by slipping by the All Stars 7 to 5.

The Buccaneers put the Rangers aside 9 to 6, despite homers by Russ Smith and Ronnie Norris.

The Buccaneers trimmed the Snakes 12 to 8. Final action came July 16 as the All Stars defeated the Knockers 5 to 1.

Last week's action started with the Bat Boys beating the Braves 13 to 12. The Gashouse Gang ganged up on the Rangers and put them down 9 to 6. The Eagles edged by the Colts, handing them their second defeat of the year, 9 to 8. Hugh Richards homered twice for the big Eagles.

Colts Make Come Back

July 21 started with the Colts coming back to defeat the Raiders 25 to 1, in a lopsided victory in which Sam Duncan collected two homers.

The N. C. Squad clipped the Bat Boys 16 to 8. The Rangers ran over the Knockers 11 to 20 in a close one.

Thursday, July 23, saw no games, as much needed rain soaked the diamond.

League standings follow:

Team	W	L
Eagles, Y-12	11	1
Colts, K-25	11	2
Snakes, Y-12	10	2
All Stars, Y-12	9	3
K-25 Gashouse Gang	9	3
Rangers, Y-12	8	5
K-25 Devils	7	5
Buccaneers, Y-12	6	6
Bat Boys, Y-12	5	8
Braves, Y-12	4	8
N. C. Squad, Y-12	4	9
Beta 2 Miners, Y-12	2	10
Raiders, Y-12	1	12
Knockers, Y-12	0	13

are used in the treatment of heart failure. Atropa belladonna, which is a native plant in Europe and planted as a garden ornamental in this country, yields belladonna so useful in treating nervous indigestion and peptic ulcer. As few as three berries can kill a child.

A certain weed called Cannabis sativa is smoked by young people hoping to either get a "kick" or escape the realities of adulthood. Even though it is illegal to grow the plant, it is amazing how available marijuana has become.

Don't eat wild plants unless you are certain they are safe. Don't allow infants or children to have access to seeds or bulbs. Don't let your children suck nectar from flowers or make "tea" from leaves.

If a friend invites you in for some homemade elderberry wine, it probably is OK. But if he offers you any other part of the plant, look out! It contains a cyanogenic glycoside which can cause fatal cyanide poisoning!



TO HEAD UP DRIVE—Named to head the United Fund drive in Anderson County have been Jake F. Butcher, right, and Rev. Ross J. Schuler, left. Butcher is chairman of the First National Bank of Anderson County (Oak Ridge and Lake City), and Rev. Schuler is pastor of Faith Lutheran Church in Oak Ridge. The two men will lead Anderson County efforts to raise \$283,000 to support two county chapters of the American National Red Cross and nineteen other United Fund public-service organizations.

Thursday's Primary, General Election Very Important to All Tennessee Voters

Next Thursday, August 6, registered voters of Tennessee will cast their votes in two different elections: a Primary and a General Election.

In the Primary the voter chooses his party's candidate for the office of Governor, U. S. Senator, Public Service Commissioner, Congressman, and members of the General Assembly. In the same contest, the voter elects his party's Executive Committeemen and Committeewomen (two men and two women from each Congressional District for each political party).

State-wide candidates in the primary election Thursday include:

FOR GOVERNOR

Democrats

Mary Anderson
Ralph Waldo Emerson
John J. Hooker, Jr.
James Albert Newton, Jr.
Stanley Snodgrass
Robert L. Taylor

Republicans

Winfield Dunn
Maxey Jarman
William Jenkins
Hubert D. Patty
Claude Robertson

American Party

Douglas Heinsohn

FOR U. S. SENATE

Democrats

Stanford Andress
Hudley Crockett
Herman Frey
Albert Gore (Incumbent)

Republicans

James D. Boles
William Brock
Tex Ritter

American Party

Cecil Pitard

Also to be named in the general election is a public service commissioner from the western division of Tennessee, a Supreme Court justice of the state, and four judges to the Court of Criminal Appeals, as well as two judges to the Court of Appeals of the Western Grand Division.

In the General Election, many county officials are to be elected. Union Carbide employees are al-

lowed time off to vote if the polls close before they get home. Personnel are advised to check with their supervision to see if they are eligible to leave work early in order to vote.

There will be a candidates' rally tonight, July 30, at Clinton High School at 7:30 p.m. Local musicians will entertain prior to the appearance of the candidates. The big event is sponsored by the League of Women Voters of Oak Ridge. Admission is free.

Up for grabs in this country are 35 Senate seats, 35 Gubernatorial seats, and all 435 seats in the U. S. House of Representatives.

Your vote is very important. Make sure you make it to the polls next week. Don't be a political dropout!

Powers, Searles, Bullard Fire Skeet High for July

Bobby Powers, Bert Searles and Perry Bullard dominated July Skeeters, as Fred Welfare fired another perfect score, his second in two months. Welfare, however, is in the penalty box for previous winnings, and cannot be included in the laurel division.

Powers fired a 48.936; Searles a 48.165 and Bullard scored a 47.915 for the high July ratings.

The August tournament is set early in the month, this coming Sunday, August 2. Firing gets underway at 1 p.m. at the Oak Ridge Sportsmen's Association. Newcomers are always welcome at the Skeet Tournaments.

July firings:

Firer	H'Cap Score
Ben Etheredge, Y-12	47.929*
Charlie Asmanes, Y-12	48.642*
Robert Allstun, Y-12	46.305
Ken Bahler, Y-12	46.534
Carl Brewster, Y-12	46.170
Alan Van Hull, Y-12	47.684
Bobby Powers, Y-12	48.936
Leon Bray, Y-12	48.610*
Dwayne Frye, ORNL	48.813*
Joe Comolander, Y-12	46.375
Perry Bullard, Y-12	47.915
Fred Welfare, ORNL	50.000*
Bert Searles, Y-12	48.165
Bill Weathersby, Y-12	49.393*
Vernon Raen, K-25	48.100*
Tommy Webber, Y-12	43.327

*Previous winner, under penalty.

What does the figure \$52 billion mean to you? It means a brighter future for millions of Americans who own that much in Series E and H Bonds and "Freedom Shares."

Electricity From the Atom

By GLENN T. SEABORG

When a utility begins planning a new electricity generating station, it has many energy sources to choose from. The new plant could be powered by coal, by oil, or by natural gas. And recently utilities have been turning to another energy source, and that's



Dr. Seaborg

the power within the nucleus of the atom.

When an atom splits apart — or "fissions" — it releases a considerable amount of heat that can be used to generate electricity. This energy source is so compact that the energy of 20,000 cubic feet of coal is packed into a one-inch cube of uranium metal.

The first large demonstration of using nuclear power to generate electricity began only 12 years ago, but utilities are already operating or planning about 100 nuclear power plants in 29 different states. We predict that by the year 2000 nuclear plants will account for about half of the electrical capacity of the nation.

Why are so many utilities selecting nuclear power for their new plants? Well, for several reasons. Ten years of experience have proved nuclear power plants to be safe, efficient, and uniquely clean; and large-size nuclear power plants are considered competitive economically with conventional generating stations. Nuclear plants also have a number of aesthetic and environmental advantages that are becoming more important to electric utilities. They don't release clouds of combustion products into the atmosphere to add to our air pollution problem, and they don't require special railroad tracks and freight cars that spread dust and noise around the plant site. However, nuclear plants reject somewhat more waste heat than conventional plants.

There will be even more advantages in nuclear power plants as new types of reactors are developed. The Atomic Energy Commission is working on a new type that will be more efficient and more economical than today's reactors. And it will actually be able to produce more fuel than it consumes — which has led us to call it a "breeder" reactor.

Future developments in nuclear power plants will give our utilities a wider range of choices for their generating stations. When they select nuclear plants, conventional fuels will be released for other applications, such as raw materials for the chemical industry. Because of the limited amount of conventional fuels and the inherent advantages of nuclear power, many of us have come to think of the atom as the fuel of the future.

CLOSE-CROPPED CASH

U. S. Savings Bonds are synonymous with indestructibility. If you lose yours, no matter how odd the circumstances, you can get a replacement at no cost from the Treasury. Take the situation of a boy in a rural community who went out to the mailbox to get the mail. On the way back to the house, the wind blew an envelope containing a Savings Bond into the path of a rotary lawn mower. Bond and envelope were shredded. The Bond was replaced.

'Nuclear' Water System Being Tested for Outer Space Use

A nuclear-fueled system to recover pure drinking water from the astronauts' waste body fluids is being tested by a four-man crew in a space simulator at Huntington Beach, Calif.

The National Aeronautics and Space Administration test, scheduled to last 90 days, is the first time radioisotopes have been used as a heat source in a manned chamber experiment. The fuel, plutonium-238, was loaned to NASA by the Atomic Energy Commission.

Odorless, Tasteless

The low temperature distillation and vapor filtered system can produce about one pound of bacteria-free drinking water per hour from perspiration, respiration and urine. It is designed to fill the needs of crewmen during extended space missions of the future. The self-contained isotopic fuel system allows the water recovery device to operate indefinitely without taking precious power or fuel from the spacecraft's power system. Space and weight restrictions rule out hauling sufficient water from the earth.

Preliminary testing of the device developed by the Air Force turned out potable water which

tested more bacteria-free than ordinary tap water. There was no taste problem and no chemicals were added to the processed water. Mound Laboratory, which is operated for AEC by Monsanto Corp., conducted the early testing at Miamisburg, Ohio. The space simulator project, which also includes several nonnuclear subsystem evaluations, is being conducted for NASA by the McDonnell Douglas Astronautics Co. The crewmen are specially selected young scientists and graduate students.

Little 'Service' Time

The water recovery device, engineered to operate in a weightless atmosphere, consists of two evaporators, a catalytic oxidation unit, a condenser and three residue storage tanks. The test model is about 30 inches wide and 45 inches tall.

Heat for the distillation process, which occurs under vacuum, comes from doubly encapsulated plutonium-238 radioisotope sources totaling about 635 grams. Moisture is pulled from the air inside the spacecraft cabin via an environmental control system and mixed in the device with urine collected from the crewmen. Only about five minutes servicing of the device is required during the entire 90-day test "mission."

Retired Persons Sound Call for New Members

The next meeting of the American Association of Retired Persons is set August 20, at 1:30 p.m., in the Green Room of the Ridge Hall in Oak Ridge.

All interested persons, 55 years and over, are invited to attend. For membership, contact Mrs. J. E. Wynn, 101 Paoli, telephone 483-3452.

Robert J. Betts, superintendent of Industrial Relations at the Oak Ridge Gaseous Diffusion Plant, was guest speaker at the July meeting of AARP, speaking on preretirement counseling programs.

August 18 and 19 are the days for the trip to Cumberland Falls and on to Bardstown to see the "Stephen Foster Story." AARP reports the successful trip to Cherokee last week, also, to see "Unto These Hills."

Norwegian Expansion Is Set by Union Carbide

Plans have been announced for a \$4.7 million expansion of the plant facilities of Union Carbide's wholly owned Norwegian subsidiary, Aktieselskabet Meraker Smelteverk.

The project will involve construction of a 25,000 kilowatt silicon metal furnace, which will be one of the world's largest, at Meraker's principal site in Kopera, Norway, as well as the modernization of the raw materials and product handling systems and of the import and export dock facilities at nearby Muruvik. Completion is expected in early 1972.

Meraker is one of the major suppliers of silicon metal, magnesium ferrosilicon, and Superseed alloy to the aluminum and cast

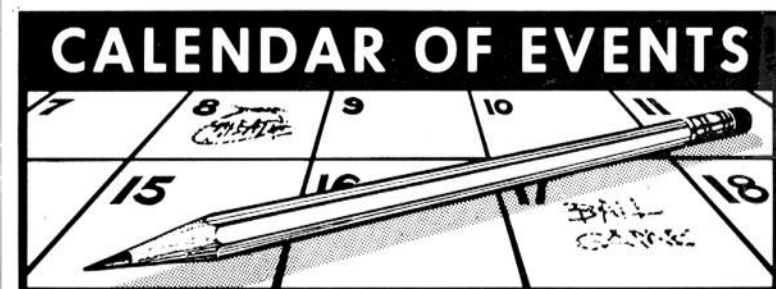


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COMMUNITY

July 30

August 4, 6, 11

Oak Ridge Community Playhouse Workshop. Everyone welcome. 7:30 to 10 p.m.

August 2, 9

Oak Ridge Community Art Center, Humanities Workshop. Ridgewood Park, 1-4 p.m. (Weather permitting).

August 7

Karns Community Fair: Queens pageant, 7:30 p.m. Square dance and ice cream supper, 9 p.m.-midnight. Karns High School.

August 8

Karns Community Fair: Exhibits 10 a.m.-7:30 p.m. Moon rock exhibit, 1-5 p.m. Karns High School.

August 18, 19

Kentucky Trip: Cumberland Falls tour and trip to Bardstown to see "Stephen Foster Story." American Association of Retired Persons.

iron industries of Western Europe. These alloys impart superior characteristics such as hardness and strength to the end products in which they are used.

Union Carbide has been operating in Norway for more than 40 years. The corporation's affiliate at Sauda, Electric Furnace Products Company, Ltd., is a major producer of manganese alloys for the steel industry in Europe.

ACC 5224-4



BY-GONE DAYS—Wheat High School, as it looked before Oak Ridge. The above photograph, made in the early 40's, shows the high school which was eventually swallowed up by the Oak Ridge Gaseous Diffusion Plant. The three unidentified women in the photograph wear their maxi-coats, even before there were any maxis! The Nuclear Division News will, from time to time, publish articles and pictures from Oak Ridge's past. Contributions are welcome.

TECHNICAL

July 31

Physics Division Seminar: "Great Lakes Colleges Association Science Semester at ORNL," M. A. Ludington, Albion College. East Auditorium, Building 4500N, 3 p.m.

Millions Now Save U. S. Savings Bonds

Millions of Americans buy and hold U. S. Savings Bonds for many reasons. One purely practical reason is the tax advantage — especially attractive when E Bonds are purchased to create "tax-free" college education funds.

Series E Bonds may be registered in the child's name, with a parent or the purchaser shown as beneficiary (but not as co-owner). At the end of the first year of Bond purchases, a Federal income-tax return is filed in the name of the child, listing the increase in Bond value (interest) as income to the child.

Filing this one return establishes "intent." No further returns need be filed, as long as Bond interest, plus other income, comes to less than \$1,700 for the years 1970 through 1972, or \$1,750 for 1973 and thereafter. And no tax is due until the income exceeds \$1,725 (for 1970), \$1,700 (for 1971 and 1972), or \$1,750 (for 1973 and thereafter). Thus, when the child's Bonds are redeemed to meet college costs, the accrued interest is free from income tax. Be sure to retain a copy of the tax return filed the first year, as proof of intent.

Tax savings can be realized another way. Simply wait until the youngster begins to cash his Bonds to pay college expenses. The student then files his or her own tax return each year, reporting the full amount of interest on redeemed Bonds as income. If that interest, plus any other income, totals less than \$1,725 for 1970, \$1,700 for 1971 and 1972, or \$1,750 for 1973 and thereafter, no tax is owed at all.

Remember, however, that this tax advantage applies only to Bonds registered in the child's name as owner — the co-ownership form of registration may not be used for such purpose (unless the child's own funds are used in the purchase).

SAFE INVESTMENTS

U. S. Savings Bonds are a safe investment. Your bonds will be replaced if lost, stolen, or destroyed.